<u>REMARKS</u>

Claims 1-9 are currently pending in this application. Claims 1 and 7 have been amended to more appropriately define aspects of the invention. Claim 3 has been amended to correct minor informalities. Claim 9 has been added to present additional aspects of the invention. In light of the amendments and remarks included herein, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections.

In the outstanding Office Action, the Examiner rejected claims 1, 6, and 7 under 35 U.S.C §103(a) as being unpatentable over U.S. Patent No. 6,097,737 to Takizawa et al. ("Takizawa"), in view of *"Image and Video Compression Standards-Algorithms and Architectures"*, 2nd Ed., 1997 to Bhaskaran et al. ("Bhaskaran"). Claims 2-4, and 8 are rejected under 35 U.S.C §103(a) as being unpatentable over Takizawa and Bhaskaran and further in view of *"International Conference on Image Processing"*, Vol. 3, 24-28 Oct. 1999, pp. 299-303 to Fernando et al. ("Fernando"). Claim 5 is rejected under 35 U.S.C §103 as being unpatentable over Takizawa and Bhaskaran and further in view of U.S. Patent No. 6,631,210 to Mutoh et al. ("Mutoh"). The Examiner also objected to claim 3 because of minor grammatical informalities. Applicants have amended claim 3 to address these informalities. Finally, the Examiner objected to the specification also because of minor

grammatical informalities. Applicants have amended the specification to address these informalities.

Claim Rejections 35 U.S.C §103: Takizawa/Bhaskaran

Applicants respectfully traverse the 35 U.S.C §103(a) rejection of claims 1, 6, and 7 because the Examiner failed to establish a *prima facie* case of obviousness. In order to establish a *prima facie* case of obviousness, the combination of cited references must teach all of the elements recited in the claim. Regarding claims 1 and 7, Takizawa merely teaches an information processing method and apparatus wherein several items of information may be transmitted efficiently within a given frequency band to different receivers (see Abstract). Specifically, Takizawa teaches an encoding apparatus which performs adaptive quantization that is based upon uncompressed image visual characteristics (column 3, lines 7-10).

In this encoding apparatus, Takizawa teaches a feature extraction circuit (115) which calculates the "energy PWR of level variations of the input image data" (column 5, lines 33-35). The PWR value appears to be essentially a variance calculation over 16 x 16 pixel blocks within an image frame (see equation 2, column 5, line 41). These blocks are arranged <u>within a particular frame</u> as shown in Figures 6a through 6c (column 6, lines 23-26; Figs. 6a-6c). Takizawa further teaches that the PWR variations are

classified into various classes depending upon their values. These values are used by the adaptive processing circuit 116 to generate a quantization auxiliary parameter using the PWR calculation (column 5, lines 54-56; Fig. 5, 116). The quantization parameter, generated by adaptive processing circuit 116, is fed into quantization circuit 115 through multiplier 117. The quantization parameter controls the quantization processing for a frame based upon the features in the image calculated by the feature extraction circuit 115 (column 7, lines 53-58).

Conversely, Takizawa fails to teach or suggest, at least "an encoding preprocessing portion for extracting an amount of the image feature from a moving image not encoded … wherein the amount of image feature is extracted on an interframe basis," as recited in claim 1, and "extracting an amount of image feature from a moving image not encoded, wherein the amount of image feature is extracted on an interframe basis," as recited in claim 7.

In summary, the feature extraction taught by Takizawa is based upon calculations performed on pixels within a single frame. These calculations subsequently impact intra-frame processing (quantization circuit 115). This is distinguished by the feature extraction recited in claim 1, which is based on inter-frame information and subsequently impacts inter-frame processing. The feature extraction as recited in claim 1 has the advantage of

detecting dissolve intervals <u>between frames</u>, wherein the intra-frame processing of Takizawa does not have this advantage.

Bhaskaran fails to cure the deficiencies of Takizawa in this respect because Bhaskaran is silent with respect to this feature. Bhaskaran merely teaches reordering <u>encoded pictures</u> in order for the decoder to have all of the information it needs to decode each received picture (see page 190, paragraph 2, lines 1-9).

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejections of claims 1 and 7. Claim 6 depends from claim 1 and by virtue of its dependency is allowable at least for the reasons provided above for allowable claim 1.

Claim Rejections 35 U.S.C §103: Takizawa/Bhaskaran/Fernando

Applicants respectfully traverse the Section 103 rejection of claims 2-4, 8 as being unpatentable over Takizawa and Bhaskaran and further in view of Fernando. Claims 2-4 depend from allowable claim 1 and include all of the features recited therein; claim 8 depends from claim 7 and includes all of the features recited therein. Fernando fails to cure the deficiencies of Takizawa and Bhaskaran because Fernando fails to teach or suggest at least "an encoding preprocessing portion for extracting an amount of image feature from a moving image not encoded … wherein the amount of image feature is extracted on an interframe basis" as recited in claim 1; and "extracting an amount of image feature from a moving

image not encoded, wherein the amount of image feature is extracted

on an interframe basis," as recited in claim 7.

Regarding claim 3, the Examiner asserts:

> [h]owever, at the time the invention was made, it would
> have been [obvious] to a person of ordinary skill in the
> art to use the distance of two as recited in claim 3.
> Applicant has not disclosed that a distance of two
> provides an advantage, is used for particular purpose, or
> solves a stated problem. One of ordinary skill in the
> art, furthermore, would have expected Applicants
> invention to perform equally well with a distance of one
> because the difference between two adjacent pictures and
> a dissolved period obviously can be no greater than
> between a first and third pictures and therefore the
> corresponding coding error can be no worse.

See Office Action: page 5, paragraph 8, lines 3-10.

Applicants respectfully direct the Examiner's attention to,

for example, pages 9-14 of the Specification regarding the

advantages of changing the distance within a Group of Pictures

(GOP).

Moreover, Applicants respectfully submit that the Examiner

appears to be taking Official Notice in support of this position,

and is respectfully reminded of the provisions of MPEP §2144.03,

and the precedence provided in *Dickinson v. Zirco*, 527 U.S. 150, 50

USPQ 2d 1930 (1999) and *In Re Allheart*, 424 F.2d 1088, 1091, 165

USPQ 418, 420 (CCPA 1970). An Official Notice rejection is

improper unless the facts asserted are well known or common

knowledge in the art, and capable of instant and unquestionable

demonstration as being well known. It is never appropriate to rely

solely on "common knowledge" without evidentiary support in the record as principle evidence upon which a rejection is based.

Therefore, Applicant traverses the Official Notice and requests that the Examiner either cite a competent prior art reference in substantiation of these conclusions, supply a personal affidavit supporting the Examiner's allegation, or else withdraw the rejection.

Accordingly, Applicants respectfully request the Examiner withdraw the §103 rejections of claims 2-4, and 8.

Claim Rejections 35 U.S.C §103(a): Takizawa/Bhaskaran/Mutoh

Applicants respectfully traverse the Section 103 rejection of claim 5 as being unpatentable over Takizawa and Bhaskaran and further in view of Mutoh. Claim 5 depends from claim 1 and includes all of the features recited therein. Mutoh fails to cure the deficiencies of Takizawa and Bhaskaran because Mutoh fails to teach or suggest, at least, "an encoding preprocessing portion for extracting an amount of image feature from a moving image not encoded … wherein the amount of image feature is extracted on an interframe basis," as recited in claim 1. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 5.
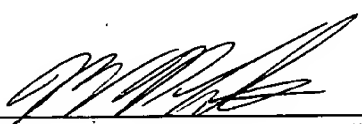
Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael R. Cammarata (Reg. No.39,491) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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